Take Test: Quiz 2.2

Test Information

Description	
Instructions	
Multiple Attempts	This test allows multiple attempts.
Force Completion	This test can be saved and resumed later.

QUESTION 1 **1 points** Saved

Which of the following is NOT a Laplace transform pair?

- $\mathbf{1}(t) \leftrightarrow \frac{1}{s}$
- $\delta(t) \leftrightarrow \frac{1}{s}$
- $t\,\mathbf{1}(t) \leftrightarrow \frac{1}{s^2}$
- $e^{-at} \leftrightarrow \frac{1}{s+a}$

QUESTION 2 **1 points** Saved

Since $\sin(\omega t) \leftrightarrow \frac{\omega}{s^2+\omega^2}$, it is also true that

- $\sin(\omega t+2) \leftrightarrow \frac{\omega+2}{s^2+\omega^2}$
- (selected) $2\sin(\omega t) \leftrightarrow 2\frac{\omega}{s^2+\omega^2}$
- $\sin(2\omega t) \leftrightarrow \frac{2\omega}{s^2+\omega^2}$
- $\sin(\omega t)+2 \leftrightarrow \frac{\omega}{s^2+\omega^2}+2$

QUESTION 3

1 points Saved

For a signal $x(t)$ with Laplace transform $X(s)$, and with $x(0)=3$, the time-derivative of the signal is described by

- $\mathcal{L}\{\frac{dx}{dt}\} = sX(s)$
- $\mathcal{L}\{\frac{dx}{dt}\} = 3X(s)$
- $\mathcal{L}\{\frac{dx}{dt}\} = \frac{X(s)}{s}$
- (selected) $\mathcal{L}\{\frac{dx}{dt}\} = sX(s)-3$

QUESTION 4

1 points Saved

For a signal $x(t)$ with Laplace transform $X(s)$, its integral is described by

$\int^t$

Question Completion Status:

- (selected) $\mathcal{L}\{\int_0^t x(\tau)d\tau\} = X(s)/s$
- $\mathcal{L}\{\int_0^t x(\tau)d\tau\} = sX(s)$
- $\mathcal{L}\{\int_0^t x(\tau)d\tau\} = X(s)/s - X(s)$

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers | **Save and Submit**